ABSTRACT

An image processing system that performs edge-enhancement on an image. The image processing system processes a region of the image at a given time. One specific pixel of an image region is compared to several surrounding pixels to determine the existence of a black edge or a white edge in the image. Additionally, the image processing system includes a classifier that determines whether the image is substantially text-like or substantially photo-like. When the image is substantially text-like, a dynamic black threshold is used to determine the existence of a black edge within the image. The dynamic black threshold is modified during the processing of the image by the image processing system as a function of the relationship between the one specific pixel to at least one other of the several surrounding pixels. The image processing system selectively applies a first threshold scheme or a second threshold scheme upon identification to the image depending on the characteristics of the one specific pixel. Using the image processing system as described herein, high frequency content, namely the sharpness of the image, is preserved while low frequency content within the image is maintained smooth thereby providing a high visually perceptually quality of the image after having performed image processing. The present invention provides a novel manner of performing edge enhancement using a dynamic threshold in certain instances and a fixed threshold in others.